REMARKS

Claims 1-17 are pending in the application. Claims 1, 5, 6 and 12-14 were rejected under 35 U.S.C. §102(e), as described in paragraph 3 of the Office Action. Claims 1, 2, 5-8 and 11 were rejected under 35 U.S.C. §102(e), as described in paragraph 4 of the Office Action. Claims 3 and 4 were rejected under 35 U.S.C. §103(a), as described in paragraph 7 of the Office Action. Claims 9 and 10 were rejected under 35 U.S.C. §103(a), as described in paragraph 8 of the Office Action. Claims 15-17 were rejected under 35 U.S.C. §103(a), as described in paragraph 9 of the Office Action. Claims 1 and 5 are the only independent claims.

Independent claim 1 is drawn to a polishing apparatus comprising, *inter alia*:

> "a pressure device connected to said dresser for moving said dresser between a raised position where said dresser is spaced away from said polishing surface and a dressing position where said dresser rests on said polishing surface **under only a pressure exerted by the weight of said dresser tool**, said pressure device **including a member for applying an upward force to said dresser to decrease the pressure during a dressing operation**."

It is respectfully submitted that neither Moore, Vanell nor Gurusamy et al. (Gurusamy) either singly or in combination, teaches the above-identified limitations.

As discussed in column 6, lines 32-35 of Moore, the "controller 193 can adjust a downforce on the conditioning body, in response to signals received from the force sensor 180 to keep the frictional force between the conditioning body 150 and the planarizing medium 121 approximately constant." As further described in column 6, lines 60-63, Moore teaches that a "relatively light downforce can be applied to the conditioning body 150, generating a small frictional force between the conditioning body 150 and the polishing pad 127." Because the force is indicated as being a frictional force, it is respectfully submitted that the frictional force as discussed in Moore is parallel to the surface of the polishing pad and the surface of the substrate. In any event, as discussed in lines 63-66 of column 6 of Moore, the "small frictional force can be either the weight of the conditioning body 150 or the weight combined with a downforce applied to the conditioning body 150 with the downforce actuator 191." Still further, as discussed in column 7, lines 7-11, the "controller 193 can

increase the downforce on the condition body 150 upon detecting the change in characteristics of the polishing pad 127, and thereby condition the polishing pad 127 by removing material from the planarizing surface 129."

In other words, Moore teaches a system for keeping a frictional force between the conditioning body and the planarizing medium constant by: 1) providing a frictional force that is either the weight of the conditioning body or the weight combined with a downward force applied to the conditioning body with the downward force actuator; and then 2) increasing the downward force on the conditioning body 151.

More specifically, Moore teaches opposite to that which is required in independent claim 1, namely, "applying an upward force to said dresser to decrease the pressure during a dressing operation."

It is respectfully submitted that Vanell additionally fails to teach a member for applying an upward force to a dresser to decrease the pressure during a dressing operation, as required in independent claim 1.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the foregoing, it is clear that Moore and Vanell do not anticipate claim 1.

Because claims 2-4 are dependent upon claim 1, and therefore include all the limitations thereof, it is additionally respectfully submitted that claims 2-4 are novel over Moore and Vanell within the meaning of 35 U.S.C. § 102.

In light of the above discussion, it is respectfully requested that the rejection of claims 1 and 2 under 35 U.S.C. § 102 be withdrawn.

It is respectfully submitted that claims 1-4 are patentable over the prior art of record within the meaning of 35 U.S.C. § 103 for the following reasons.

Because neither Vanell nor Moore teaches a member for applying an upward force to a dresser to decrease the pressure during a dressing operation, as required in independent claim 1, it is respectfully submitted that a combination of the teachings of Vanell in view of Moore additionally fails to teach that which is required in independent claim 1.

It is respectfully submitted that Gurusamy fails to teach the shortcomings of Moore and Vanell such that a combination of Moore, Vanell and Gurusamy would teach that which is required in independent claim 1. In particular, similar to Moore and Vanell, Gurusamy fails to teach a member for applying an upward force to a dresser to decrease the pressure during a dressing operation, as required in independent claim 1.

In light of the above discussion, it is respectfully submitted that claim 1, and dependent claims 2-4, are patentable over the combination of Moore, Vanell and Gurusamy within the meaning of 35 U.S.C. § 103.

As discussed above, claim 1 requires a pressure device for moving the dresser to position such that the dresser tool is in contact with the polishing surface **"under only a pressure exerted by the weight of said dresser tool**."

Claim 5 is drawn to a polishing apparatus comprising, *inter alia*:

> "a dresser tool holding device for holding said dresser tool and moving said dresser tool between a raised position where said dresser tool is spaced away from said polishing surface and a dressing position where said dresser tool rests on said polishing surface **with a pressure being exerted by said dresser tool on said polishing surface as a result of the sole weight of said dresser tool**."

It is respectfully submitted that neither Moore, Vanell nor Gurusamy either singly or in combination, teaches the above-identified limitations.

As discussed above, Moore teaches that the **frictional force** can be either the weight of the conditioning body 150 or the weight combined with a downforce applied to the conditioning body 150 with the downforce actuator 191. Because a frictional force is equal to a coefficient of friction (μ) times the weight of a body, it is respectfully submitted that a frictional force is not equal to a weight (or force due to gravity). Accordingly, at most, Moore teaches modifying a frictional force **based on a downward force**. More specifically, Moore fails to teach a dresser tool in contact with the polishing surface under **only a pressure exerted by the weight of the dresser tool**, as required in independent claim 1; or a pressure being exerted by the dresser tool on the polishing surface as

a result of **the sole weight of the dresser tool**, as required in independent claim 5. Accordingly, Moore fails to teach that which is required in independent claims 1 and 5.

Similarly, it is respectfully submitted that neither Vanell nor Gurusamy teach the shortcomings of Moore such that a combination of Moore, Vanell or Gurusamy teaches that which is required in independent claims 1 and 5. In particular, neither Vanell nor Gurusamy teaches a dresser tool in contact with the polishing surface under only a pressure exerted by the weight of the dresser tool, as required in independent claim 1; or a pressure being exerted by the dresser tool on the polishing surface as a result of the sole weight of the dresser tool, as required in independent claim 5.

In light of the above discussion, it is respectfully submitted that claims 1 and 5 are patentable over the combination of Moore, Vanell and Gurusamy within the meaning of 35 U.S.C. § 103. Furthermore, as claims 2-4 and 6-17 are dependent upon claims 1 and 5, respectively, it is additionally respectfully submitted that claims 2-4 and 6-17 are patentable over the combination of Moore, Vanell and Gurusamy within the meaning of 35 U.S.C. § 103.

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Respectfully submitted,

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February 25, 2004